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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,482	11/12/2003	Dierk Frank	HOE95/F236RE1	7591

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EXAMINER
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VO, HAI

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 07/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/706,482

Applicant(s)

FRANK ET AL.

Examiner

Hai Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. The art rejections over Frank et al (US 5,789,075) in view of Andersen et al (US 5,830,548) are maintained.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-56 are rejected under 35 U.S.C. 103(a) as being obvious over Frank et al (US 5,789,075) in view of Andersen et al (US 5,830,548). Frank teaches a composite material suitable as a thermal insulating material comprising a SiO<sub>2</sub> aerogel mat laminated to a polymeric film (column 7, lines 15-20). Frank teaches the aerogel mat having porosity above 60%, density below 0.6 g/cc and thermal conductivity of 20 mW/mk (abstract, example 2). Frank discloses the aerogel having hydrophobic surface groups and containing IR opacifiers and fibers (column 2, lines 30-31, and 40-42; column 5, lines 10-12). Frank discloses the aerogel mat having been surface modified via silylating, polycondensed and dried (column 6, lines 20-42). Frank does not specifically disclose the polymeric film being one from the Markush group. Andersen, however, teaches a composite material for use in thermal insulation comprising an aerogel insulating material sandwiched between two layers of polyethylene terephthalate (column 6, line 60, column 71, line 47). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to be motivated by the desire to use polyethylene

terephthalate film layer as a polymeric film because such is intended use of the material and Andersen provide necessary details to practice the invention of Frank.

### ***Response to Arguments***

4. The art rejections have been maintained for the following reasons. Applicants argue that there is no disclosure in Frank et al of a material coated by an aerogel coating. The examiner respectfully disagrees. Frank teaches a composite material comprising a SiO<sub>2</sub> aerogel mat laminated to a polymeric film (column 7, lines 15-20). "The film is **coated** on at least one surface with an aerogel coating" is a product-by-process limitation not as yet shown to produce a patentably distinct article. It is the examiner's position that the article of Frank as modified by Andersen is identical to or only slightly different than the claimed article prepared by the method of the claim, because both articles are formed from the same materials, having structural similarity. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or an obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show unobvious differences between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289,291 (Fed. Cir. 1983). It is noted that if the applicant intends to rely on Examples in the specification or in a submitted Declaration to show non-obviousness, the applicant

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should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with article of Frank as modified by Andersen.

Since the claims do not positively recite whether the entire surface of the film is coated with an aerogel coating, the "lamination" broadly reads on Applicants' coating. Applicants assert that nowhere does Frank disclose or suggest an aerogel coating formed by the process recited in claims 1 and 22. The arguments are not found persuasive for patentability because Frank discloses the aerogel mat having been surface modified via silylating, polycondensed and dried (column 6, lines 20-42). Applicants contend that Andersen does not related to a coating on a material but rather to sheets of material incorporated into laminates. Again, the examiner maintains that "coated" or "laminated" is related to a product-by-process limitation and a composite materials formed from the processes (coating or laminating) are not structurally different. The burden is shifted to the applicant to show unobvious differences between the claimed product and the prior art product. Accordingly, the art rejections are sustained.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory

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action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (571) 272-1485. The examiner can normally be reached on Monday through Thursday, from 9:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HV

Hai Vo

**HAI VO  
PRIMARY EXAMINER**